E-commerce and the MOT Program at Anderson Schools of Management -- UNM

Sul Kassicieh

Albert Franklin Black Professor of Entrepreneurship Anderson School of Management- UNM

MOT Program

- founded in 1995 as a successor to Technology Innovation Program (http://asm.unm.edu/mot)
- 5 students in 1995, 50 in 2000 (largest of 10 concentrations at ASM)
- concentration in MBA program with focus on hands-on technology and market assessments and high tech startup business plans
- e-commerce is an added focus for program

MOT Program

- collaborative work with laboratories, universities as sources of technology, adding management expertise and training new entrepreneurial talent
- combining research in management models with actual implementation of technology assessments, forecasting and business development from business plan to operational plan
- Our technological entrepreneurship program helped 25 startup firms last year: help in increasing deal flow in NM

E -commerce concentration

- using same principles of MOT program work in technology commercialization
- Mission of e-commerce program is to support the economic development of NM (including remote areas: Native American Management Center)
- 5 courses in strategy, technology, financial implications, marketing, entrepreneurship
- our students are the e-commerce leaders of tomorrow



The University of New Mexico

Making Technological Entrepreneurship Successful in NM: The MOT program at ASM

Sul Kassicieh 277-8881

kasicieh@unm.edu http://asm.unm.edu/mot



MOT Program

- 1. Mission
- 2. Courses
- 3. Philosophy and Style
- 4. Integration with Technology Community



Mission

The University of New Mexico

The mission of the MOT program is to engage in educational, research and technology commercialization activities and to remain one of the premier MOT programs in the world.



Courses

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Core course required of all MBA students: MGT 511 Managing Technology in Competitive Markets

Other courses:

MGT 512 Strategic Management of Technology

MGT 513 Technological Forecasting and Assessment

MGT 515 Innovative Product Development

MGT 518 Project Management

MGT 519 Project in Technology Commercialization



Courses

The University of New Mexico

MGT 514 Technological Entrepreneurship

Building a business plan for a high-technology startup by examining:

- management plan
- financial plan
- marketing plan
- production plan
- strategic direction



Courses

The University of New Mexico

MGT 516 Sources of Capital for Technology-based Companies

- Strategic Alliances and Consortia
 - types
 - formation issues
 - implementation issues
- Venture Capital
 - sources
 - requirements



Philosophy and Style

- 1. Emphasis on a clinical approach: all our concentration courses have projects dealing with a real company and a real idea
- 2. Strong link to the technology base in New Mexico: we win when you win.
- 3. Knowledge of technology areas beyond the casual observation



Faculty

- Sul Kassicieh
- Steve Walsh
- A number of experts from the technology community: Vic Berniklau, Mark Allen , Carol Sumpter, George Friberg among many others
- Call me if you have the time and interest



Success measures

- Number of companies supported in entrepreneurial startup
- Number of students placed in technology organizations
- Number of projects for students and faculty
- Funded grants and contracts
- Publications in academic and practitioner journals



- Technology assessment for the New Ventures Program at Sandia : MODE, Wavefront, etc. that received VC funding
- Technology assessment and business development for WERC: Immunosensors and Activated Carbon that received seed capital for further development
- Technology assessment and business development for STC @ UNM



- Business Plans for a number of high technology startups: Management Sciences, Willow Systems, SiNaF and many others that are in process of deciding on taking the entrepreneurial plunge
- Work with Sandia on strategic business development in MEMS, Optoelectronics and Ceramics
- Work with JPL, Lucent on R&D management issues
- Developing business plans for e-commerce startups



- Graduates placed at Sandia, Los Alamos, Andersen Consulting, IBM, Intel, etc.
- Funding for grants and contracts of \$300,000 over last 3 years
- Excellent feedback from the business and academic community
- A number of publications in academic and practitioner journals



- In the technological entrepreneurship course, we are building business plans for 14 New Mexico high technology startups.
- Commercialization of Disruptive Technologies contract with Sandia
- Commercialization of MEMS Conference (September 1998) : 200+ attendees
- MOT expert panel on Aerospace Industry: 150 attendees



- IEEE Engineering Management Society Conference organization: conference dates August 13-15, 2000
- Planning for Commercialization of MEMS conference in September 2000 sponsored by Sandia and UNM
- contract with General Atomics for Russian tech startups
- continued work with many organizations



To increase success for NM Entrepreneurs

- management expertise needed to start new high technology companies
- Students (with some funding to survive), faculty (with no funding) and some seasoned management expertise (with no funding) collaborate to become the "surrogate" entrepreneurs to take some innovations to commercialization.
- Graduating students are "next generation" of seasoned experts who will help others with starting new ventures



Benefits

- Students: learn on the job with faculty and experienced managers, Payoff to students later as company succeeds
- Faculty and Managers: opportunities for research and accomplishment of clinical approach; benefits as companies succeed
- Less startup funding needed for new company
- More commercialization activities possible



Benefits

- Technology community benefits from development of new management talent
- Technology community benefits from technologists developing more innovations that are commercialized
- More companies (and more jobs) created for community